NOTES.

The retirement, on August 15, of Sir Patrick Manson, K.C.M.G., F.R.S., from the post of medical adviser to the Colonial Office is announced. The duties hitherto discharged by him will in future be divided, and the Secretary of State for the Colonies has appointed Sir J. Rose Bradford, K.C.M.G., F.R.S., to be senior medical adviser, and Mr. C. W. Daniels to be junior medical adviser to the Colonial Office in London. It is also announced that Mr. W. T. Prout, C.M.G., has been appointed medical adviser to the Colonial Office in Liverpool. Sir Patrick Manson has been appointed a Knight Grand Cross of the Order of St. Michael and St. George in recognition of his eminent services in connection with the investigation of the cause and cure of tropical disease.

The Secretary for Scotland has appointed a committee to advise the Board of Agriculture for Scotland in matters relating to forestry. The following gentlemen have accepted the invitation to serve on such an advisory committee:—Mr. John D. Sutherland (chairman), the Right Hon. R. C. Munro-Ferguson, M.P., Sir John Stirling Maxwell, Bt., Sir W. S. Haldane, and Mr. R. H. N. Sellar.

Prof. L. E. Bouvier, of the Jardin des Plantes, has been appointed "Ray Lankester Investigator" for 1912–13, and in the course of this month will enter into occupation of the Ray Lankester table in the laboratory of the Marine Biological Association at Plymouth. At the request of the trustees, the nomination for this first appointment was made by Sir E. Ray Lankester, K.C.B., F.R.S.

At the forthcoming meeting of the British Association in Dundee an innovation will be made which foreshadows a widening, in some measure, of the interests and scope of the association. It has been suggested recently from various quarters that, instead of the one lecture to the "operative classes" hitherto given during the annual meeting by a lecturer appointed by the association, a larger number of lectures should be arranged for the benefit of the classes of citizens at the place of meeting who do not, as a rule, join the association. A somewhat similar idea underlay the arrangement, in 1909, of two "popular lectures to the citizens" of Winnipeg, with the special conditions obtaining in that city in view. But on the present occasion three such lectures will be provided, and will be given in the Gilfillan Hall, Dundee, on Thursday evening, September 5, by Prof. Benjamin Moore, on "Science and National Health"; on Saturday, September 7, by Prof. E. C. K. Gonner, on "Prices and Wages"; and on Tuesday, September 10, by Prof. A. Fowler, on "The Sun."

The following are among the subjects to be dealt with in Section E (Geography) of the forthcoming meeting of the British Association. The president, Colonel Sir C. M. Watson, proposes to deal with the geography of the Sudan, taking up the story where Sir Samuel Baker left it, when he presided over the section at the last Dundee meeting. There will be other papers on the Sudan and adjoining countries. Desert conditions will be treated of by Mr. H. Harding King (the Libyan Desert) and Mr. J. N. Dracopoli (Mexico). Part of one morning will be devoted to the Antarctic regions, Sir Clements Markham contributing a paper on Antarctic discovery, and Dr. W. S. Bruce opening a discussion on the Antarctic continent. There will also be lectures by Sir Wm. Willcocks on irrigated Canada, and by Dr. H. M. Ami on recently opened-up regions of the Dominion.

In response to a joint appeal made by the Royal Society of South Africa and the South African Association for the Advancement of Science to the Union Government, a sum of 500*l*. has been voted during the current financial year as a grant-in-aid for the purpose of assistance in scientific work in or relating to South Africa. A scheme for the administration of this and future funds available for the same purpose on lines similar to that of the Government Grant Fund of the Royal Society has been prepared by a joint committee representing the two above-mentioned societies.

A movement is on foot to erect in Westminster Abbey a memorial window to the late Lord Kelvin. To further the interest of the scheme a large committee composed of representatives of engineering societies of the British Empire and the United States of America has been formed. The honorary treasurer of the fund is Dr. J. H. Tudsbery, 12 Dartmouth Street, Westminster.

In future the Sleeping Sickness Bureau will be known as the Tropical Diseases Bureau, and the offices will be in the Imperial Institute. In October next the "Sleeping Sickness" and "Kala-azar Bulletins" will give place to the "Tropical Diseases Bulletin," in which will be published summaries of all the current literature of tropical and subtropical diseases. A quarterly "Tropical Veterinary Bulletin" will also be issued by the bureau.

A gold medal has been awarded by the Royal Horticultural Society to Prof. R. Newstead, F.R.S., of the University of Liverpool, for his exhibit of insects injurious to cultivated plants on the occasion of the Royal International Horticultural Exhibition held in London in May last.

The American medicine gold medal for 1912 has been awarded to Dr. W. C. Gorgas, Ancon, Panama, as the American physician who in the judgment of the trustees has performed the most conspicuous and noteworthy service in the domain of medicine during the past year.

Mr. B. G. Cooper has been appointed secretary of the Aëronautical Society of Great Britain in the place of Mr. T. O'B. Hubbard, who is resigning the position. The appointment will take effect from August 14.

Reuter's Agency announces the arrival, at Port Chalmers, of the *Aurora*, Dr. Mawson's Antarctic exploration ship. All the members of the expedition were in good health.

It is proposed to acquire the estate of Corstorphine Hill as the site of Zoological Gardens for Edinburgh. The estate will cost 17,000*l*., and 8000*l*. will be required for an initial collection of animals.

AN International Congress of Comparative Pathology is being organised by the Société de Pathologie Comparée to be held in Paris in October next. The subjects for discussion will range over the whole field of pathology, and will include veterinary and plant pathology. Among the problems to be discussed are tuberculosis (pathogenesis), human and avian diphtheria, cancer, variola and vaccinia, parasites common to man and animals, hydrophobia, comparative study of the cirrhoses, vegetable pathology, &c. Those desirous of making communications to the congress or of taking part in the discussions should communicate with the general secretary, 42 rue de Villejust, Paris.

THE ninth International Congress of Zoology is to be held at Monaco from March 25 to 30, 1913. Prince Albert of Monaco will preside. Inquiries should be addressed to Prof. Joubin, general secretary of the congress, Institut Océanographique, 195 rue Saint-Jacques, Paris.

THE twelfth International Geological Congress will be held in Toronto in August of next year, and, according to *Science*, the following topics have been selected by the executive committee as the principal subjects for discussion:—The coal resources of the world; differentiation in igneous magmas; the influence of depth on the character of metalliferous deposits; the origin and extent of the pre-Cambrian sedimentaries; the subdivisions, correlation and terminology of the pre-Cambrian; to what extent was the Ice age broken by interglacial periods? the physical and faunal characteristics of the Palæozoic seas with reference to the value of the recurrence of seas in establishing geologic systems. The honorary president of the congress is to be H.R.H. the Duke of Connaught, the presidential chair being filled by Dr. Frank D. Adams, dean of the faculty of applied science and Logan professor of geology, McGill University, Montreal. Mr. R. W. Brock, director of the Geological Survey of Canada, will be the general secretary.

A FINE skull of the extinct horned reptile Triceratops has just been mounted in a new case in the Geological Department of the British Museum (Natural History). The specimen was discovered in the Upper Cretaceous Laramie formation of Converse County, Wyoming, U.S.A., by Mr. Charles H. Sternberg, who undertook a special expedition to obtain it for the museum. The skull, with the bony crest, measures a little more than 6 ft. in length, while the brain-cavity, of which a cast has been taken, has a length of only 6 in., with a greatest width of 2 in. The comparatively small size of the trunk is shown by the bones found associated with the skull, among which the fused neck-vertebræ, a scapulo-coracoid, and a humerus are especially well preserved. A few isolated horn-cores from the same geological formation and locality are interesting as showing their variation in shape, and also the marks of the blood-vessels which nourished their sheath. It has been known for several years that similar fossils occur further north in Canada, but they have not hitherto been systematically collected. Mr. Charles H. Sternberg is now being employed by the Victoria Memorial Museum at Ottawa to examine these new localities, and he will spend the present summer in exploring the Red Deer river district of Alberta.

AN appeal is being made on behalf of the London School of Tropical Medicine for a sum of 100,000*l.* to provide an adequate endowment fund, to make additions to the laboratory accommodation and residential quarters for the increasing number of students, to provide for the prosecution of research, and to provide a small nursing home for those civilians whose means are inadequate to procure special nursing and medical treatment for their needs. An influential committee, formed at the request of Mr. Harcourt, Secretary of State for the Colonies, and under the chairmanship of Mr. Austen Chamberlain, is issuing the appeal, and has already collected 15,000*l.*

PROF. OTTO JAEKEL, of Greifswald, has issued a circular directing attention to the want of a palæontological society in Germany, which shall serve as a link between zoologists and geologists and shall at the same time define more clearly the ground to be occupied by these two groups. Prof. Jaekel invites the cooperation of palæontologists outside Germany, and looks forward especially to a closer union of workers in eastern Europe. It is proposed that the annual subscription to the new society shall be 20 marks, and that the first meeting shall be held at Halberstadt in the beginning of September. Halberstadt, lying at the foot of the Harz Mountains, is easily reached from all sides, and is an important centre for the study of Triassic fossils, including dinosaurs. Communications as to the society may be made direct to Prof. Jaekel.

UNDER the title "Sea Fisheries Organisation and Research," *The Times* on July 11 published an article of some importance, written by a correspondent who has evidently followed closely the attitude of the Government in connection with these matters in England during the last decade. After reviewing the various attempts at organisation and reorganisation which have occurred, the writer goes on to consider the position as it appears to stand at the present time. "Mr. Runciman and his new Chief of Staff have probably a greater opportunity now than has occurred in the memory of man of organising sea-fisheries research and administration throughout the country so as to unite the various cooperating bodies—all doing useful work in their own way—into one harmonious scheme such as will promote the development of a great national industry." A defence of the scientific man against the charge so often brought by the layman, that his work is not "practical," is then made, and concludes thus:—"It is merely a delusion of the ill-informed that science is unpractical or that the modern scientific man is not an efficient administrator. Science and administration are not antagonistic, ought never to be kept apart, and should surely be most intimately interwoven in the case of an industry like the national fisheries, based on scientific principles and requiring constant scientific supervision and investigation."

After the deplorable attitude recently adopted in Parliament by Mr. Runciman, the Minister in charge of the Fishery Department, such a vigorous statement of the position cannot be too often repeated.

IN the daily Press of July 12 it was announced, on the authority of Reuter's Agency, that Major H. Schomberg, a well-known German big-game hunter, has arrived in Europe from Liberia with five living specimens of the pigmy hippopotamus (*Hippopotamus liberiensis*), these being the first examples to reach Europe alive. Major Schomberg started in April, 1911, on an expedition fitted out by Mr. Hagenbeck in search of these animals, but had to return without attaining his object. Starting again in December, he proceeded from Monrovia into the hinterland, finally reaching Taguerna, a fortified town in the forest, where, in the course of two months, he appears to have procured his specimens. Of these, two have been purchased by the American Zoological Society, while the remaining three are in Germany.

IN the July issue of *Man*, Major A. J. N. Tremearne describes the curious Hammock Dance performed at Sierra Leone. A grass hammock is suspended between two posts some 20 or 30 ft. in height. To the blatant music of a native orchestra the performer climbs into the hammock, and from it swings and balances himself in various remarkable ways. The show usually continues for hours, "until the performers and the audience are exhausted or overcome with drink."

THE American Anthropological Association and Folklore Society have cooperated in starting an important quarterly review under the title of *Current Anthropological Literature*. The first number contains reviews of the more important books issued during the quarter, notes on new publications, and a classified summary of the more valuable articles and papers arranged according to the regions to which they relate. The publication promises to be of much importance to anthropologists, who are invited to send copies of papers in scientific publications to Dr. A. F. Chamberlain, Clark University, Massachusetts, U.S.A.

THE Corporation of Croydon, with the view of popularising the study of the collections in the Grange Wood Museum, has published at a nominal price two useful descriptive pamphlets, by Mr. E. A. Martin, on the pre-Roman and Roman exhibits. The former include eoliths from Titsey Hill and Botley Hill, palæoliths from the driver-drift, and remains from hut dwellings on Croham Hurst and Worms Heath. The most remarkable discovery made in the neighbourhood was that at Waddon, where three arched subterranean chambers were found in 1902. They were apparently used for sepulchral purposes, and belong to the Neolithic age. Three hoards of bronze represent primitive foundries. The Roman remains consist largely of coins. The pamphlets provide a useful account of man in the pre-Roman and Roman periods, and will add much to the educational value of the collections.

The Journal of Genetics for June, 1912 (vol. ii., No. 2) contains two articles—one by Mr. L. Doncaster and the other by Mr. R. Staples-Browne—on the inheritance of colour in pigeons; but in neither case do the results obtained admit of being summarised within the limits of the space at our disposal. The second article is illustrated with a coloured plate showing the colour-effects produced by crossing turtle-doves, collared turtle-doves, and the so-called white Java doves.

IN the July number of Witherby's *British Birds*, Mr. Meade-Waldo—who was largely instrumental in establishing the species in the Midland counties—defends the little owl (*Athene noctua*) from the charge of killing young game-birds, stating that it is mainly insectivorous, although it kills a number of young passerine birds while its young are in the nest. On the other hand, two other correspondents in the same issue reiterate the charge of game-poaching.

IN his annual address to the South London Entomological and Natural History Society, as printed in the Proceedings for 1911–12, the president, Mr. W. J. Kaye, directed attention to the great abundance of butterflies during the hot summer of 1911, the frequent production of second and third broods, and likewise the prevalence of supposed phases. The species that particularly responded to the unusual conditions was the small copper (*Rumicia phloeas*), which multiplied exceedingly in places where it is usually rare, and visited suburban gardens in numbers.

UNDER the title "Hortus Mortolensis" (West, Newman, price 4*s*.), A. Berger has published a catalogue, with interesting notes, of the plants growing in the famous garden at La Mortola, near Ventimiglia, Italy, founded in 1867 by the late Sir Thomas Hanbury. No efforts have been spared to develop La Mortola into an important subtropical botanic garden, from which seeds and plants are now distributed to almost every botanical establishment in the world, and which has been visited and described by many botanists; for instance, a long and interesting chapter is devoted to La Mortola in Prof. Strasburger's "Rambles on the Riviera" (English translation, 1906).

FROM Prof. J. M. Coulter, University of Chicago, we have received reprints of two papers of general botanical interest, one dealing with the problems of plant-breeding and the other with the relations of palæobotany to botany In the former the eminent Chicago botanist briefly recapitulates the remarkably rapid progress made in plant-breeding since the rediscovery of Mendel's work and the publication of de Vries's mutation theory; touches upon the more recent work of Johannsen, Winkler, Baur, Nilsson, Aaronsohn, and others; and emphasises the "inextricable entanglement" of biological science and agricultural practice, pointing out that any result of scientific plant-breeding, representing as it must additional knowledge of the processes of evolution and of heredity, may become of practical service, while any result of practical plant-breeding, involving as it does extensive experiments with plants, may prove to be of great scientific importance. In the second paper the author indicates some of the recent reactions of modern palæobotany upon the phylogeny of the higher plants, and points out that the great problem of palæobotany to-day is the history of the Angiosperms.

THE annual reports of the West Indian Department of Agriculture are, as usual, very satisfactory, showing continued progress in various directions. The activities of the staff cover a wide range; plants are distributed from the Botanical Gardens; instructors are sent out to show the best methods of cultivation; in some islands prizes are awarded for the best holding; and investigations are undertaken of the numerous insect and fungoid pests. Large importations of Hevea rubber seeds were made at Grenada with the view of diversifying the agriculture; improvements have been effected in the limejuice in Dominica; Para rubber (but not Maniçoba rubber) is proving successful in St. Lucia, while in spite of a bad season, the output of limes from the Virgin Islands was higher than in previous years, and the value of the cotton crop was increased.

AN investigation has been made by Prof. Ewart, of Melbourne, on bitter pit in apples, the results of which are published in the Proceedings of the Royal Society of Victoria, vol. xxiv., part 2. He concludes that bitter pit is not a disease, but a symptom of local poisoning produced in the sensitive pulp cells of the apple, which may be induced by a variety of poisons. In some cases poisonous sprays may be the cause, and the trouble appears to be more prevalent in sprayed orchards than in those that have never been sprayed or had poison applied to the soil. But this is not an invariable rule, and it will be interesting to ascertain what poisons are at work in unsprayed orchards. During the course of the work it is shown that the cells of the apple fruit are extraordinarily sensitive to traces of poison.

IN a note in our issue of May 16 on the proposed substitution of electric for gas lighting in the House of Commons, we expressed doubts as to the necessity for placing the lights behind amber-coloured glass in order to guard against the effects of ultra-violet light on the eye. Our view is confirmed by a paper by Dr. Louis Bell which appears in the May number of the Proceedings of the American Academy of Arts and Sciences, and records the results of a series of measurements of the amounts of ultra-violet light sent out by various artificial lights per candle-power. The quartz mercury arc in its diffusing globe sends out least, and the carbon arc enclosed in quartz most, ultra-violet rays per candle-power, but the numbers for these artificial sources are far exceeded by that for daylight. In these circumstances it seems unnecessary within buildings to protect eyes which prove themselves hardy enough in the daylight outside.

THE value obtained by Prof. Joly twenty years ago for the specific heat of air at constant volume was for many years regarded as too high compared with the values for the specific heat at constant pressure obtained by Regnault and Wiedemann. Three years ago Dr. Swann published results for the latter quantity, determined by the continuous-flow method, which were higher than those obtained previously, and fitted in well with the observations of Joly. A copy of a paper by Drs. Scheel and Heuse, of the Reichsanstalt, which appeared in a recent number of the *Annalen der Physik*, has reached us, which confirms Swann's result, and gives values of the specific heat of air down to −183° C. The method used was that of continuous flow, and the results in gram degrees at 15° C. per gram degree are as follows:—at 20° C., 0·241; at −78° C., 0·243; and at −183° C., 0·253.

MESSRS. A. F. HOST AND SON, of Copenhagen, announce the early publication of vol. i. of the "Report on the Danish Oceanographical Expeditions, 1908–1910, to the Mediterranean and Adjacent Seas." Dr. Johs. Schmidt, the leader of the expeditions, will contribute an introduction, and other chapters will deal respectively with hydrographical observations, hydrography of the Mediterranean and adjacent waters (by J. N. Nielsen), exact determination of the chlorine in some samples of sea water from the Mediterranean (by H. Bjorn-Andersen), determination of the quantity of oxygen in sea water (by S. Palitzsch), the amount of oxygen in the water of the Mediterranean (by J. P. Jacobsen), measurement of the hydrogen ion concentration in sea water (by S. Palitzsch), the deposits of the sea-bottom (by O. B. Bøggild). Other volumes dealing with biological matters will be issued later.

Errata.—By a regrettable oversight the heading of the article in NATURE of July 11 *re* the Provisional Programme of Sections of the forthcoming meeting of the British Association appeared as "The Sheffield Meeting of the British Association." The meeting will, of course, be held at Dundee, as is stated in the article.—In the letter of Prof. MacBride on "Hybrid Sea-urchins," in NATURE of July 4, p. 450, col. i., for *Echinus nuharis* read *Echinus miliaris*.

OUR ASTRONOMICAL COLUMN.

THE MASSES OF DOUBLE STARS.—The following interesting figures concerning the masses of pairs of double stars are published by Dr. Doberck in No. 4583 of the *Astronomische Nachrichten*; the spectral type (Harvard) is shown in brackets:—η Cassiopeiæ (F8), 0·87; 40 o^2 Eridani (G5), 0·43; Sirius (A), 3·26; Castor (A), 72·19; Σ 3121, 371·9; γ Virginis (F), 8·09; α Centauri (G, K5), 1·99; ζ Herculis (G), 0·73; μ^2 Herculis (G5), 1·11; 70 p Ophiuchi (K.), 2·58; and 85 Pegasi (G), 3·07. Excluding Castor and Σ 3121, the former because the orbit is uncertain, and the latter because the parallax is too small, the mean value is 2·46, and as this includes both stars of the pair, the average mass of a single star is approximately equal to that of the solar system, which is taken as unity. The data are, as yet, too meagre to allow of any attempt to correlate average mass and spectral type.

SOLAR PROMINENCES IN 1911.—According to Prof. Riccò's annual summary, published in No. 5, vol i. (2nd series), of the *Memorie della Società degli Spettroscopisti Italiani,* the frequency, size, and magnificence of the solar prominences observed at Catania in 1911 were all considerably less than in 1910. The mean